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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------------|------------------|
| 10/072,506  | 02/05/2002  | Masatoshi Imai       | 59227/SONYP                    | 2876             |
| 24201   | 7590        | 01/04/2007           |                                |                  |
| FULWIDER PATTON<br>6060 CENTER DRIVE<br>10TH FLOOR<br>LOS ANGELES, CA 90045 |             |                      | EXAMINER<br>NGUYEN, CAM LINH T |                  |
|   |             |                      | ART UNIT                       | PAPER NUMBER     |
|   |             |                      | 2161                           |                  |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 01/04/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/072,506             | IMAI, MASATOSHI     |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | CamLinh Nguyen         | 2161                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/16/2006 has been entered.
2. Applicant's amendments to the Office Action are acknowledged. Consequently, claims 1 – 18 are currently pending.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 8, 11 – 15, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata Tetsuro (U.S. 5,274,777) in view of Larry Phillips (U.S. 5,867,601).

◆ As per claims 1, 4, 11,

Kawata discloses a sort processing method for comparing magnitudes of pieces of input data with each other and rearranging said pieces of input data in accordance with results of

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comparison (col. 1, lines 30 – 34), in a pipeline configuration (col. 4, lines 14 – 16, col. 5, lines 34 - 36) said method comprising the step of:

- “Repeating basic processes, each of which is composed of a combination of a comparison processing and a selection processing, in a pipeline configuration, said comparison processing being used to compare magnitudes of pieces of input data with each other by using data comparators and said selection processing being used to select pieces of input data by using data selectors” See Fig. 4, col. 1, lines 35 – 65, col. 4, lines 23 – col. 5, lines 22. In particular:
  - “The basic process” corresponds to the process of execution of an instruction in which includes a comparison and selection (See Fig. 2a)
- “Wherein the total number of said basic processes is equal to the number of combinations of pieces of input data to be compared” See col. 5, lines 54 – 58.
- Basic blocks (see Fig.5 wherein each cycle corresponds to a block), each of which includes a first stage including basic cells and a second stage including basic cells (input data).
- wherein the number of basic cells in the first stage of the basic block is greater than the number of basic cells in the second stage of the basic block (see col. 4, lines 23 – 27, Kawata discloses that a larger data must be select. Therefore, the number of basic cells in the first stage of the basic block is greater than the number of basic cells in the second stage of the basic block.

Kawata does not clearly disclose that the basic process in parallel. However, Phillip, on the other hand, discloses a parallel processing that can convert data into an odd stage and even stage (see

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the abstract of Phillip). It would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Phillip into the invention of Kawata because the combination would speed up the process and reduce the time for the sorting process by using parallel processing system as disclosed by Phillip.

◆ As per claims 2, 6, 13, the combination of Kawata and Phillip disclose:

- “A sort processing method according to claim 1 wherein the size of sort processing is increased by raising the number of basic processes to keep up with an increase in the number of pieces of input data” col. 2, lines 57 – 63 of Kawata.

◆ As per claims 3, 7, 14, the combination of Kawata and Phillip disclose:

- “A sort processing method according to claim 1 whereby, if necessary, a clock signal is used for synchronizing said pieces of input data” See the abstract, col. 3, lines 65 – 68 of Kawata.

◆ As per claims 5, 8, 12, 15, the combination of Kawata and Phillip disclose:

- “A sort processing apparatus according to claim 4 wherein said first data selector is provided with a pair of data selectors used for receiving a pair of pieces of input data; and said first data selector is controlled on the basis of said first select signal so as to allow output terminals of said data selectors to output said pair of pieces of input data in a predetermined magnitude order” See Fig. 1 and associated texts of Kawata.

◆ As per claim 18, the combination of Kawata and Phillip disclose:

Claim 18 is rejected based on the rejection of claims 11 and 15.

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5. Claims 9 – 10, 16 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawata Tetsuro (U.S. 5,274,777) in view of Larry Phillips (U.S. 5,867,601) further in view of Lewis et al (U.S. 6,775,667).

◆ As per claims 9, 16,

Kawata does not clearly disclose:

“A sort processing apparatus according to claim 4 wherein, if the number of said pieces of input data is odd, an invalid piece of input data is added to said valid pieces of input data to make the total number of said pieces of input data even, and said invalid piece of input data is set at a value greater than a maximum among said valid pieces of input data or a value smaller than a minimum among said valid pieces of input data”.

However, Lewis, on the other hand, discloses a sort processing method that disclosed this limitation in Col. 11, lines 13 – 15.

It would have been obvious to one with ordinary skill in the art at the time the invention was made to apply the teaching of Lewis into the system of Kawata/Phillip because the combination would speed up the sort processing.

◆ As per claims 10, 17, Kawata/Phillip/Lewis disclose:

- “A sort processing apparatus according to claim 4 wherein said first basic cells are laid out over a rectangular area” See Fig. 2 – 3 Lewis.

### ***Response to Arguments***

6. Applicant's arguments filed 5/30/2006 have been fully considered but they are not persuasive.

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Applicant states that: "in the present Office Action, the independent claims were rejected ... is addressed below" and "since these claims depend directly of indirectly from independent claims, it is submitted that they are patentable in view of the patentability of the independent claims as set forth above".

However, Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. Therefore, the references are still read on the instant application.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CamLinh Nguyen whose telephone number is 571 – 272 - 4024. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571 – 272 - 4146. The fax phone number for the organization where this application or proceeding is assigned is 571 – 273 - 8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nguyen, Cam-Linh

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A handwritten signature in black ink, appearing to read "Nguyen Cam-Linh", with a horizontal line drawn underneath the name.